

May 6, 2014

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Subject: V.C. Summer Units 2 and 3 Guaranteed Substantial Completion Dates

Reference: (1) Engineering, Procurement, and Construction Agreement for AP
1000 Nuclear Power Plants, Dated May 23, 2008- V.C. Summer
Units 2 and 3

(2) VSP_VSG_002024, dated August 6, 2012

Gentlemen:

On May 23, 2008, we executed the EPC Agreement with the Consortium for Units 2 and 3 at our V.C Summer nuclear facility. That was an historic day for our companies. We would like to believe that it was equally significant to you. Together, we helped kick off what we continue to hope will be a new wave of nuclear construction in this country.

The V.C. Summer facility offers the best template for future projects. Although you signed EPC agreements with two other utilities at about the same time, both of

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those projects are currently embroiled in major litigation. We chose a different path. We resolved to work with you amicably, believing that building the project cooperatively, on time and on budget, would be in the best interests of all involved.

The events since May 23, 2008 have tested our resolve. In this letter, we will review certain of those events for the benefit of your current management. We believe that such a review is called for because of the many turnovers in your management since May 23, 2008. With one possible exception, no one from your two companies who attended the signing ceremony is still involved in the project. Since then, Westinghouse has had at least two Presidents, three Project Directors, and two Commercial Directors. Shaw was acquired by CB&I, and has had comparable turnover, with five Commercial Directors, two Project Directors and two Construction Managers.

Before reviewing the relevant events, we wish to share with you our view that the management turnovers have been accompanied by a change in attitude. Senior managers who began the project appeared to appreciate the significance of the task to our customers and to the nuclear community at large, and exhibited a commensurate dedication. Events indicate that this has been replaced by a different attitude, one that is less focused and seems intent on taking advantage of our cooperative nature.

We should also mention that we have noted the evident deterioration of the relationship between senior management at Westinghouse and Shaw/CB&I. Repair of that relationship will likely be necessary if you are to satisfy our concerns. As a Consortium, the two firms are jointly and severally liable to us. It does not matter to us which of you caused a specific problem. We look to both of you to remedy all the Consortium's deficiencies.

We regret that this letter is necessary and regret its length. Your poor performance has made both necessary. A complete description of our grievances would make this letter even longer. Consequently, we have chosen to focus on the events and issues concerning the structural modules, primarily CA-20 and CA-01, as well as certain design issues, and their combined effect on the expected completion date and cost of the project. We selected these examples to illustrate our dissatisfaction. They are not an exhaustive listing of your every shortcoming.

I. THE EPC AGREEMENT ESTABLISHED THE PROJECT SCHEDULE

The EPC Agreement stated the Consortium's commitment to meet following dates for Unit 2:

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Activity	Unit 2
CA-20 On-Hook	November 18, 2011
CA-01 On-Hook	March 29, 2012
Guaranteed Substantial Completion	April 1, 2016

To meet these dates, it was essential that the Consortium timely complete module fabrication, delivery, and assembly. The Consortium selected Shaw Modular Solutions, LLC ("SMS"), an affiliate of the Consortium, as the module fabricator. Problems with SMS's work began almost immediately. The NRC attempted to inspect the SMS facility between January 10 and 12, 2011, but the inspection had to be "terminated early because of the current status of activities at SMS." To the NRC's apparent surprise, SMS had not yet made enough progress to make an inspection worthwhile.

By letter dated February 22, 2011, SMS advised the NRC of its expectations for module production and shipment, as follows:

SMS expects to be at a high level of production of structural modules in early June 2011. SMS expects that shipment of the first structural sub-module will occur the end of June 2011..... If schedule changes are necessary, SMS will promptly notify the NRC.

SMS did not meet these module production and shipment dates. We are unaware if it gave the NRC the promised notice of these failures.

The NRC returned to inspect the SMS site between November 14 and 18, 2011. That inspection led to a "Notice of Nonconformance," dated January 6, 2012, based on deficiencies in SMS's quality assurance program. The Notice of Nonconformance stated:

During this inspection, the NRC inspection team found that the implementation of your quality assurance program failed to meet certain NRC requirements which were contractually imposed on you by your customers or NRC licensees. Specifically, the NRC inspection team determined that SMS was not fully implementing its quality assurance program in the areas of training, design control, procurement document control, control of special processes, control of measuring and test equipment, control of nonconforming items, and corrective actions consistent with regulatory and contractual requirements, and applicable implementing procedures.

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II. THE AUGUST 6, 2012 AGREEMENT CHANGED THE GUARANTEED SUBSTANTIAL COMPLETION DATES

By July 7, 2012, only 21 of 72 CA-20 sub-modules had been delivered to the site. Despite the poor progress, you assured us that you had resolved the module production problems. This led to the Agreement of August 6, 2012.

The 2012 Agreement recites that it resolved several pending change order requests. An additional motivation for us was to enable you to put the past module issues behind you and have a fresh start. Section IV.A of that agreement established the following revised guaranteed substantial completion dates:

Activity	Unit 2	Unit 3
Guaranteed Substantial Completion	March 15, 2017	May 15, 2018

After execution of the 2012 Agreement, you had no one to blame but yourselves for future module delays. Section IV.D of the 2012 Agreement made clear that future module delays would be your sole responsibility. It stated in pertinent part:

Except as otherwise provided for in Article 9 of the EPC Agreement or Section XII.D of this Agreement, Contractor will not submit further Change Orders for any impacts to Project Schedule or Contract Price associated with Structural Module schedule delays and agrees that such further schedule delays will be the responsibility of Contractor.

Although the parties released certain claims against each other in the 2012 Agreement, Section XII.D of the agreement stated that our release did not apply to any claims "that may arise hereunder from Contractor's failure to deliver the Structural Modules referenced in Section III.C of this Agreement, so as to achieve" the revised Guaranteed Substantial Completion Dates.

The 2012 Agreement imposed on the Consortium certain additional scheduling obligations to enable us to monitor module progress. Section IV.D of that agreement stated:

In order to measure impacts to the Project Schedule associated with Structural Module delivery, Contractor agrees to provide a detailed Structural Module delivery and assembly baseline schedule within 30 calendar days of the execution of this Agreement and to report actual progress against this schedule on at least a monthly basis.

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The Consortium prepared the new baseline schedule for module delivery and assembly, as called for in this Agreement, but it has not provided the monthly progress reports.

In sum, the Consortium decided to engage SMS, an affiliated entity, as the module fabrication subcontractor. SMS proved to be neither equipped nor qualified to produce the modules. Nevertheless, in July 2012, we worked with you amicably by allowing you additional time that was made necessary, at least in part, by SMS's poor performance. In exchange, you agreed that you would not be entitled to any additional time extensions due to future module delays.

III. MODULE DELAYS CONTINUED AFTER THE 2012 AGREEMENT

Despite the Consortium's assurances, module production did not improve after the 2012 Agreement. The Consortium issued a module delivery and assembly baseline schedule, dated August 10, 2012, as called for in the 2012 Agreement. That schedule contained a series of milestone dates, including the following on-hook dates for CA-20 and CA-01:

Activity	Unit 2 Milestone Date
CA-20 On-Hook	January 19, 2013
CA-01 On-Hook	May 28, 2013

The Consortium has not met these on-hook dates or any other milestone dates in that schedule.

A. Module Status In September 2012

As of September 27, 2012, at least thirty of the milestone dates had already come and gone without completion of the associated milestone event. By that time, only 31 of the 72 sub-modules for CA-20 had been delivered to the site. As a result of the module production and delivery delays, we wrote to you on September 27, 2012. That letter stated:

Due to the current status of the structural modules, the Owner remains concerned that the late fabrication, delivery, and installation of structural modules will impact the Consortium's ability to meet the critical path schedule date of January 28, 2013¹ (CA20 on-hook date), and eventually to meet the revised Unit 2 Guaranteed Substantial Completion Date (GSCD) and possibly the Unit 3 GSCD. The Owner requests the

¹ This date was incorrect. The letter should have referenced a January 19, 2013 CA-20 on-hook date.

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Consortium continue to provide structural module status updates during the weekly project review meetings and other status updates as previously agreed. Also, beginning no later than October 10, 2012, provide bi-weekly written status updates on the fabrication, delivery, and installation of the structural modules, including information on any structural module issues. Finally, the Owner requests the Consortium review with the Owner the Consortium's documented contingency plans concerning the structural modules prior to October 19, 2012. These contingency plans should include, at a minimum, actions to be taken by the Consortium to meet currently scheduled structural modules CA01-CA05 and CA20 on-hook dates and installation dates to support the Project schedule.

The Consortium did not comply with any of these requests.

As of September 2012, you had still not resolved your NRC issues. The NRC performed an unannounced inspection on September 10-14, 2012, which led to another "Notice of Nonconformance" arising out of deficiencies in SMS's quality assurance program. The NRC documented this in its letter of October 24, 2012, which stated:

During the inspection, the inspectors found that the implementation of your QA program did not to meet [sic] certain NRC requirements imposed on you by your customers or NRC licensees. Specifically, SMS failed to promptly correct conditions adverse to quality and significant questions adverse to quality, failed to effectively implement a corrective action regarding documentation of late entries in a quality records procedure, failed to preclude recurrence of significant conditions adverse to quality related to identification and control of items, and failed to perform adequate corrective actions associated with a nonconformance identified during a previous NRC inspection.

Shortly after this, the NRC advised CB&I of a "chilled work environment" at the Lake Charles facility, which was causing employees to believe that they "are not free to raise safety concerns using all available avenues" and that "individuals have been retaliated against for raising safety concerns."

B. Module Status In March 2013

By March 6, 2013, only 40 of the 72 sub-modules for CA-20 had been received. At our request, a meeting to discuss module production was held among executive officers in Columbia on April 9, 2013. Westinghouse did not attend the meeting, but CB&I was there and it promised that the Consortium would deliver four modules in the

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second quarter of 2013, 40 modules in the third quarter, and 39 modules in the fourth quarter. It also informed us of a significant delay in the on-hook dates, as follows:

Activity	Delayed Unit 2 Date
CA-20 On-Hook	October 31, 2013
CA-01 On-Hook	September 4, 2014

The Consortium missed the revised CA-20 on-hook date of October 31, 2013 and, as of today, has yet to reach this milestone. The Consortium is also not on schedule to meet the revised CA-01 on-hook date of September 4, 2014.

C. Module Status In May 2013

By May 25, 2013, the Consortium had delivered only 41 of the 72 CA-20 sub-modules. And it had delivered only one of these in the preceding eleven weeks.

D. The Consortium Reported Schedule Delays In June 2013

On June 5, 2013, SCE&G publicly disclosed your statement to us that you would not be able to meet the required completion dates in the 2012 Agreement. We reported your estimate that completion of unit 2 would occur in either the fourth quarter of 2017 or the first quarter of 2018 and your estimate that completion of unit 3 would be "similarly delayed." Due to these delays, we also reported that SCE&G's 55% cost of the project could increase by \$200 million. We noted that these schedule changes and cost increases resulted from "delays in the schedule for fabrication and delivery of sub-modules for the new units."

E. Module Status In July 2013

We saw no improvement over the next several months. By July 18, 2013, the Consortium had delivered only 44 of the 72 CA-20 sub-modules. This means that it had delivered only three modules in the preceding 11 weeks.

On August 7, we sent you another letter expressing our concerns about delays. On September 17, you advised us that, unless we objected, you would move the work of completing some CA-20 sub-modules from Lake Charles to the site. Your proposal was to move the uncompleted sub-modules into a temporary, onsite quarantine area to complete document processing and make minor repairs. We responded that we would not interfere with your decisions about how best to perform the work.

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F. The Consortium Reported Further Schedule Delays In September 2013

On September 18, 2013, the executives of all involved companies met in Columbia. That meeting resulted in a September 25 letter from you, which included a schedule showing the following activities and dates:

<u>Activity</u>	<u>Unit 2 Target Date</u>	<u>Unit 2 Late Date</u>
CA-20 On-Hook	January 24, 2014	January 27, 2014
CA-01 On-Hook	July 18, 2014	September 18, 2014
Substantial Completion	December 15, 2017	December 15, 2017

Your letter also stated that:

The Unit 2 CA01 sub-module delivery schedule is being reviewed to incorporate the latest information and will be transmitted to you by October 2, 2013. We have scheduled a management meeting on October 3, 2013, to review these deliverables with your team.

The promised October 2 letter and schedule showed that all CA-20 sub-modules would be delivered by November 4, and CA-01 sub-module shipments would extend between November 3, 2013 and July 18, 2014. The letter and schedule also introduced, for the first time, a CA-20 "minimum configuration" concept that we believe has the potential to further impede your ability to achieve timely project completion. This concept conflicts with the 2012 Agreement, and associated August 10, 2012 baseline schedule, which call for a complete (equipment loaded) CA-20 module to be set on its foundation by January 19, 2013.

Your October 2, 2013 letter went on to state:

The Consortium is taking additional management measures to add certainty to this schedule. Resources have been added to engineering to reduce the backlog of E&DCRs and N&Ds and improve the turnaround time to disposition these items. Personnel from Lake Charles have been located at the V.C. Summer site to perform final inspections and document closeout. Resources have been added to the modules team to repair or rework any conditions identified on the sub-modules and prepare them for assembly. A daily Lake Charles Plan of the Day process has been implemented to drive schedule, elevate issues and resolve problems. Weekly CBI senior management review and monitoring of Lake Charles progress against the plan has been established. Milestone Managers are

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being added to the site team to drive schedule and accountability for module assembly and placement. We believe that actions such as these will improve performance.

Although this letter does not amend the EPC Agreement or modify our commercial positions, we commit our support to the Project in achieving the schedules provided herein. We will maintain frequent and transparent communications with your staff to ensure that any significant change in schedule is raised and understood. We encourage SCANA to monitor our schedules and provide immediate feedback if they are not meeting your expectations.

Of the CA-20 sub-modules remaining to be delivered as of this date, seven were earmarked for delivery to the onsite quarantine area for completion of document processing and minor repairs. Those sub-modules were not ready to be incorporated into the construction.

Weekly module update calls began on October 14. By December, however, the level of participation by Consortium management had begun to wane. "Frequent and transparent" communications did not materialize, and we have not received "immediate feedback" when we have raised schedule issues.

In our letter of October 21, 2013, we stated:

You have represented that this schedule embodies the Consortium's realistic expectations concerning performance of Unit 2 work and its commitment to achieve Unit 2 substantial completion date by December 15, 2017.

We appreciate the Consortium's efforts in preparing these schedules and the Consortium's commitment to allocate additional resources and to perform as to achieve Unit 2 substantial completion by December 15, 2017. We must remind you, however, that the Consortium remains contractually committed to the dates for substantial completion stated in the July 11, 2012 Letter Agreement. As you correctly noted, the schedules in no way amend the Agreement. In the Letter Agreement, the parties agreed to a Unit 2 Guaranteed Substantial Completion Date of March 15, 2017, and a Unit 3 Guaranteed Substantial Completion Date of May 15, 2018.

G. Design Deficiencies Came To Light During September 2013 On-Site Assembly

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On September 3, 2013, Westinghouse informed us that it had identified problems with the design of CA-04. The Consortium had planned to set that module on the Nuclear Island in September 2013, but it delayed that work because of the need to modify the concrete foundation. The foundation placement was then put on hold during the foundation redesign and associated procurement.

H. Module Status In December 2013

By December 4, 2013, all 72 CA-20 sub-modules had finally been delivered to the site, although 30 of them required documentation processing and repairs at the on-site quarantine area. The modification effort continued well into 2014.

On January 8, 2014, Westinghouse informed us that six Engineering and Design Coordination Reports (E&DCR) had to be completed before placement of CA-20. It also advised us that another sixteen E&DCRs would need to be completed after placement of CA-20, but before placement of wall concrete.

As of February 2014, none of the 47 CA-01 sub-modules had been delivered, although 20 should have been delivered by then, according to the October 2, 2013 schedule.

I. Module Status In March 2014

The Consortium has been providing our construction team with daily email updates relating to CA-20, but the updates continue to illustrate performance shortcomings. The March 11, 2014 email update reflected an on-hook date of March 31. The email updates of March 12 and 13 reflected the same date, but stated that such date was "in jeopardy" and pending management review. The March 14, 15, 17 and 18 email updates all reflected a date of April 7 for this activity. Those from March 20, 21, 22, 23, 25, 26 and 27 all stated that the April 7 date was "under review." Beginning on March 28, the email updates stated that the on-hook date had slipped again to May 10. In short, the projected on-hook date for CA-20 continues to slip and, by the end of March, we were farther away from completion of that activity than the Consortium had stated we were at the beginning of March.

The Consortium's progress with CA-01 has also been poor. Westinghouse has informed us that it is reviewing its design for that module and future changes could delay its placement. Due to these design issues, documentation approving placement of CA-01 is not expected until August 31, 2014.

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IV. DESIGN ISSUES HAVE CONTRIBUTED TO THE PROJECT DELAY

A. IFC Design Delays

Other design issues, in addition to those identified above, have also delayed the project and are expected to contribute to future delays. Foremost among these is the delayed completion of Issued For Construction (IFC) drawings. The IFC percentage complete is the Consortium's primary metric for evaluating the status of design. That information shows that the Consortium has failed to meet expectations for design finalization and has misjudged its own performance.

The Consortium's early reports of design progress were optimistic. For example, in the March 17, 2011 Monthly Project Review minutes, the Consortium reported that it had delivered 90.49% of the scheduled IFC documents. As a result, the Consortium stated, "Design finalization is coming to an end and transitioning to support the Certified for Construction (CFC) design."

The May 19, 2011 Monthly Project Review minutes continued to reflect satisfactory progress. They reported Westinghouse's statement that design finalization was considered to be complete by the Department of Energy (DOE) and according to WEC's definition. The minutes also reported Westinghouse's estimate that the design was 95% complete. In addition, they reported Westinghouse's statement that the remaining engineering had been defined in a resource-loaded schedule, which it would use to monitor progress to completion.

The October 20, 2011 Monthly Project Review minutes reported Westinghouse's statement that site-specific engineering was winding down and that design finalization should be complete in the summer of 2012.

The Consortium began reporting design delays in May 2012, when you advised us that you would not meet the October 11, 2012 schedule for many of the IFC packages. On December 31, 2013, the Consortium reported to us that the IFC design documents were now only 94% complete. The Consortium continued this trend of revising design progress downward. On March 31, 2014, Westinghouse reported that the IFC documents were only 88% complete.

B. Design Issues Impact Nuclear Island Civil/Structural Work

Westinghouse's many design changes have also adversely impacted the Nuclear Island (NI) civil/structural work. One example concerns the A2 I wall in the Auxiliary

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Building, which is a fairly simple reinforced concrete wall. Two of the construction packages are VS2-1210-COW-003 (rebar/embeds for I wall areas 4 and 5) and VS2-1210-CCW-001 (concrete for I wall areas 4 and 5). There were 109 unique E&DCRs between the two work packages. Ninety-two (92) of the E&DCRs were WEC initiated. This wall placement was delayed several weeks due to the design clarifications and changes.

C. Design Issues Are Requiring Multiple License Amendment Requests

The lack of WEC design maturity is evident in the high numbers of License Amendment Requests (LARs) and Departures to the Final Safety Analysis Report (FSAR) being submitted. As noted in the April 17, 2014 project status review meeting, 90 LARs have been identified; the NRC has approved 11 LARs; and 15 LARs are under NRC review. The following are three examples of these LARs and their importance:

- LAR 13-01/WEC LAR 54 (base mat shear reinforcement design spacing requirements) adversely impacted the schedule for Unit 2 nuclear island base mat concrete placement.
- LAR 13-02/WEC LAR 55 (base mat shear reinforcement design details revising the licensing basis from ACI 349 to ACI 318) also adversely impacted the schedule for Unit 2 nuclear island base mat concrete placement.
- LAR 14-01/WEC LAR 60 (Auxiliary Building structural details) has adversely impacted the schedules for construction of Auxiliary Building walls and floors and construction of structural module CA 20.

Furthermore, we anticipate that LAR 13-33/WEC LAR 53 (condensate return in the Containment Building) will impact construction progress. The same is true of LAR 14-07/WEC LAR 78 (CA04 tolerances); LAR 14-05/WEC LAR 72- CA05; LAR 13-13/WEC LAR 02a (Turbine Building structural layout, which has been approved for Plant Vogtle); and LAR 13-14/WEC LAR 08 (Battery Room changes). We also anticipate that an LAR will be needed for coating thermal conductivity methods, which will impact Containment Vessel ring 1.

In addition to the LARs, the Consortium has also had a large number of Departures. The April 17, 2014 project status report states that 595 Departures have

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been identified. Of these 237 are in process and 358 are in the queue. These Departures do not require NRC review but have the potential for impacting the project schedule due to Westinghouse's design changes.

V. OUR FRUSTRATION CONTINUES TO MOUNT

As a result of these events, our frustration continues to mount. You have made promise after promise, but fulfilled few of them.

We are aware that the Consortium is in the process of preparing yet another re-baseline of the project schedule. We are entitled to a re-baseline schedule that reflects all mitigation measures reasonably possible to ensure completion of Units 2 and 3 on or near the currently projected completion dates. Please note that this statement of our rights is not an acceleration order. The currently projected completion dates are already past the dates to which the parties agreed in the 2012 Agreement. The delays since then have been solely the Consortium's fault. Thus, you are contractually obligated to take the steps necessary to mitigate the delays at your own expense.

Your unexcused delays will cause our project costs to increase greatly. We intend to hold you strictly to all provisions of the EPC Agreement and expect you to reimburse us for all our additional costs.

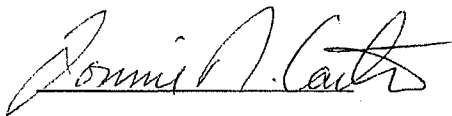
We have prepared a preliminary estimate of the added costs associated with your most recent completion projections, that is, completion of unit 2 in either the fourth quarter of 2017 or the first quarter of 2018 and a similar delay to completion of unit 3. Based on such delays, we estimate that we will incur about \$150 million in additional site costs, and will be entitled to about \$100 million in liquidated damages. If you fail to meet your most recent completion projections, these amounts will be even higher. We are in the process of investigating other additional costs that we are incurring due to the unexcused delays or associated changes to your work plan. We will advise you of their categories and amounts once we have completed our investigation.

Any future delays to those projections will require further adjustments to the payment schedules.

VI. CONCLUSION

It is imperative that the Consortium demonstrate a renewed commitment to this project. To help achieve that, we wish to discuss these performance deficiencies and associated delays with you, as well as the measures that you intend to take to mitigate the delays. We also wish to explore with you the extent to which the Consortium's unexcused project delays constitute breaches of material provisions of the EPC Agreement.

Respectfully,



Lonnie N. Carter

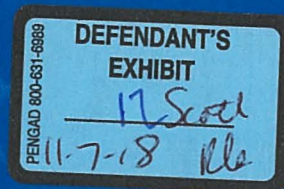
President & CEO Santee Cooper



Kevin B. Marsh

President & CEO SCANA

South Carolina Office of Regulatory Staff
Review of South Carolina Electric & Gas Company's
2015 1st Quarter Report on
V. C. Summer Units 2 & 3
Status of Construction



July 30, 2015



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Executive Summary

On May 15, 2015, SCE&G submitted its 2015 1st Quarter Report related to construction of V.C. Summer Units 2 & 3 in Jenkinsville, SC. The Quarterly Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending March 31, 2015. With reference to the Base Load Review Act, ORS's review of SCE&G's Quarterly Report focuses on SCE&G's ability to adhere to the approved schedule and approved budget.

Approved Schedule and Budget Review

On March 12, 2015, SCE&G filed with the Commission in Docket No. 2015-103-E a Petition seeking approval to update the construction milestone schedule as well as the capital cost schedule for the Units. In its Petition, SCE&G is requesting the Commission to modify the construction schedule to reflect new substantial completion dates of June 19, 2019 and June 16, 2020 for Unit 2 and Unit 3, respectively. SCE&G reports to ORS that the Consortium continues to experience delays in fabrication and delivery of sub-modules for the Units and that these delays are the primary purpose for issuing a Revised Schedule.

On June 29, 2015 SCE&G, ORS and the South Carolina Energy Users Committee entered into a Settlement Agreement related to the Petition. For additional details, see "Notable Activities Occurring after March 31, 2015," on page 18 of this report.

During the 1st quarter 2015, the project continued to make progress toward the completion of several major construction milestones. However, the project continues to experience delays due to design and delivery issues. The critical path work continues to be centered on Unit 2 Nuclear Island work necessary to allow additional concrete pours inside the Containment Vessel and within the Auxiliary Building perimeter walls. ORS continues to monitor this work closely.

This Petition includes incremental capital costs that total approximately \$698 million (SCE&G's portion in 2007 dollars); of which \$539 million are associated with these delays and other contested costs. The total project capital cost is now estimated at approximately \$5.2 billion (SCE&G's portion in 2007 dollars) or \$6.8 billion including escalation and allowance for funds used during construction (SCE&G's portion in future dollars). The cumulative amount projected to be spent on the Units by December 31, 2015 is \$3.7 billion.

The construction schedule and budget presented in SCE&G's Quarterly Report is based on SCE&G's Petition. Therefore, until the Commission issues an order in response to SCE&G's Petition, ORS will not have the ability to provide complete updates on the status of the approved schedule or approved budget.

Introduction and Background

On March 2, 2009, the Public Service Commission of South Carolina ("Commission") approved South Carolina Electric & Gas Company's ("SCE&G" or the "Company") request for the construction of V.C. Summer Nuclear Station AP1000 Units 2 & 3 (the "Units" or "Project") in Jenkinsville, SC and the Engineering, Procurement and Construction ("EPC") Contract with Westinghouse Electric Company ("WEC") and CB&I Stone & Webster, Inc. ("CB&I") (collectively "the Consortium"). The Commission's approval of the Units can be found in the Base Load Review Order No. 2009-104(A) filed in Docket No. 2008-196-E.

Subsequent to the Base Load Review Order, the Commission has held three (3) hearings regarding the Units and issued the following Orders:

- **Order No. 2010-12**: Issued on January 21, 2010 and filed in Docket No. 2009-293-E. The Commission approved SCE&G's request to update milestones and capital cost schedules.
- **Order No. 2011-345**: Issued on May 16, 2011 and filed in Docket No. 2010-376-E. The Commission approved SCE&G's petition for updates and revisions to schedules which included an increase to the base project cost of approximately \$174 million.
- **Order No. 2012-884**: Issued on November 15, 2012 and filed in Docket No. 2012-203-E. The Commission approved SCE&G's petition for updates and revisions to schedules which included an increase to the base project cost of approximately \$278 million.

The anticipated dependable capacity from the Units is approximately 2,234 megawatts ("MW"), of which 55% (1,228 MW) will be available to serve SCE&G customers. South Carolina Public Service Authority ("Santee Cooper") is currently contracted to receive the remaining 45% (1,006 MW) of the electric output when the Units are in operation and is paying 45% of the costs of the construction of the Units. In October 2011, SCE&G and Santee Cooper executed the permanent construction and operating agreements for the Project. The agreements grant SCE&G primary responsibility for oversight of the construction process and operation of the Units as they come online. On March 30, 2012, the Nuclear Regulatory Commission ("NRC") voted to issue SCE&G a Combined Construction and Operating License ("COL") for the construction and operation of the Units.

In 2010, SCE&G reported that Santee Cooper began reviewing its level of ownership participation in the Units. Since then, Santee Cooper sought partners in its 45% ownership. Santee Cooper signed a Letter of Intent with Duke Energy Carolinas, LLC in 2011. On January 28, 2014, Duke Energy Carolinas, LLC filed a report with the Commission stating that it concluded its negotiations with Santee Cooper which resulted in no change in ownership of the Units. On the day before, January 27, 2014, SCE&G announced that it had an agreement to acquire from Santee Cooper an additional 5% (110 MWs) ownership in the Units. The agreement is contingent upon the Commercial Operation Date of Unit 2. Ultimately, under the new agreement, SCE&G would own 60% and Santee Cooper would own 40% of the Units. The new agreement and the specific terms are subject to Commission approval and have yet to be presented to the Commission. The Project continues to be governed by the ownership responsibilities as established in the EPC Contract.

On May 15, 2015, SCE&G submitted its 2015 1st Quarter Report ("Quarterly Report") related to construction of the Units. The Quarterly Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending March 31, 2015 ("Review Period"). The Company's Quarterly Report is submitted pursuant to S.C. Code Ann. § 58-33-277 (Supp. 2014) of the Base Load Review Act ("BLRA"), which requires the Quarterly Report to include the following information:

1. Progress of construction of the plant;
2. Updated construction schedules;
3. Schedules of the capital costs incurred including updates to the information required in Section 58-33-270(B)(5);
4. Updated schedules of the anticipated capital costs; and
5. Other information as the Office of Regulatory Staff may require.

With reference to Section 58-33-275(A) of the BLRA, the review by the Office of Regulatory Staff ("ORS") of the Company's Quarterly Report focuses on SCE&G's ability to adhere to the approved construction schedule and the approved capital cost schedule.

Approved Schedule Review

Milestone Schedule

On March 12, 2015, SCE&G filed with the Commission, in Docket No. 2015-103-E, a petition seeking approval to update the construction milestone schedule as well as the capital cost schedule for the Units ("Petition"). In its Petition, SCE&G is requesting the Commission to approve the revised construction schedule ("Revised Schedule") which reflects new substantial completion dates ("SCDs") of June 19, 2019 and June 16, 2020 for Unit 2 and Unit 3, respectively. SCE&G reports to ORS that the Consortium continues to experience delays in fabrication and delivery of submodules for the Units and that these delays are the primary purpose for issuing a Revised Schedule.

The construction schedule presented in SCE&G's Quarterly Report is based on SCE&G's Petition. Therefore, until the Commission issues an order in response to SCE&G's Petition, ORS will not have the ability to provide complete updates on the status of the approved schedule.

Major Structural Modules ("Big Six")

The Big Six modules for the Units are CA01 through CAD5 and CA20. (See Appendix A for illustrations). The supply of these modules is specifically identified in the Fixed/Firm cost category of the EPC Contract and key components to WEC's modular design of the Units. Table 1 and Table 2 provide a summary of the status of the Big Six modules as of the end of the review period:

Table 1: Unit 2 Big Six Modules

Unit 2 Module #	Description	Vendor	Submodules Received	Certification Paperwork	Status
CA01	Houses Steam Generator/ Pressurizer and Refueling Canal	CB&I-Lake Charles, LA	47 of 47	47 of 47 on Site and Under Review	Assembly complete waiting for scheduled on Hook Date
CA02	In-Containment Refueling Water Tank Wall and Heat Exchanger Wall Module	CB&I-Lake Charles	5 of 5	Pending	Being Assembled in MAB
CA03	In-Containment Refueling Water Storage Tank Wall Module	SMCI in Lakeland, FL	1 of 17	1 of 17	Pending
CA04	Reactor Vessel Cavity	CB&I-Power (On-Site)	5 of 5	Complete	Set in Place on 10/21/13
CA05	Containment Vessel Passive Cooling System Tunnel Walls	CB&I-Lake Charles, LA	8 of 8	Complete	Set in Place on 12/6/14
CA20	Auxiliary Building and Fuel Handling Area	CB&I-Lake Charles, LA	72 of 72	Complete	Set in Place on 5/9/14

Table 2: Unit 3 Big Six Modules

Unit 3 Module #	Description	Vendor	Submodules Received	Certification Paperwork	Status
CA01	Houses Steam Generator/ Pressurizer and Refueling Canal	Toshiba/IHI Yokohama, Japan	2 of 47	2 of 47	Pending
CA02	In-Containment Refueling Water Tank Wall and Heat Exchanger Wall Module	CB&I-Lake Charles, LA	0 of 5	Pending	Pending
CA03	In-Containment Refueling Water Storage Tank Wall Module	SMCI in Lakeland, FL	0 of 17	Pending	Pending
CA04	Reactor Vessel Cavity	SMCI in Lakeland, FL	5 of 5	Complete	Set in place on 6/29/15
CA05	Containment Vessel Passive Cooling System Tunnel Walls	CB&I-Lake Charles, LA	0 of 8	Pending	Pending
CA20	Auxiliary Building and Fuel Handling Area	Oregon Iron Works Portland, OR	16 of 72	16 of 72	Pending

Specific Construction Activities

Approximately 4000 workers are currently on-site, 3500 Consortium (including subcontractors) and 500 SCE&G. Major construction activities during the review period are discussed below by Unit:

Unit 2

The Company reported that the critical path for Unit 2 remains the fabrication of the Shield Building ("SB") panels supplied by Newport News Industries ("NNI"). Through the end of the 1st quarter, 57 of 167 Unit 2 panels have been received. The secondary critical path continues to be the assembly of module CA01 and construction of the Annex Building. All CA01 submodules have been delivered to the site and assembly is underway in the Module Assembly Building ("MAB"). Unit 2 work continued in the Containment Vessel ("CV") with the installation of rebar, embedment plates and electrical conduit in preparation for the placing of layer 3 and 4 in the CV base. However, this work is being delayed due to resolution of the weldable coupling licensing basis code compliance issues that are further discussed in the "Notable Activities Occurring after March 31, 2015," on page 18 of this report.

Work continued on securing CA20 in place with three-quarters of the needed anchor blocks in place. It was noted that the north wall on CA20 needed realignment. This wall was removed and was in the process of being realigned.

Module CA05, which forms the chemical and volume control system tunnel and passive core cooling system walls within the CV was completed and set in place inside the CV. Assembly of CA22 module, which houses filters for the Reactor Cooling Water System was completed and is ready to be set inside the CV.

Work on Unit 2 Nuclear Island ("NI") Auxiliary Building ("AB") continued with the forming of walls to support level 2 and level 3 of the AB. The exterior walls needed to support backfilling to begin the erection of the Unit 2 Annex Building were completed and backfilling began.

Turbine Building ("TB") work continued with the installation of structural steel and work on the turbine pedestal. Condenser water boxes and the first section of permanent stairwell were installed. Work continued on installing the Service Water System, Condenser Tube Cleaning System, Condensate Draining System, and Condensate Polishing System.

Welding on the CV Ring 1 to the Containment Vessel Bottom Head ("CVBH") continues. The welding of attachment plates and ventilation fittings continued on CV Ring 2. Welding of the 3rd and final course of plates for CV Ring 3 has been completed. Assembly began on the plates that will be welded together to form the CV Top Head, which forms the crown on the CV.

Cooling Tower ("CT") 2A is substantially complete. The installation of rebar and placement of concrete for the walls of CT 2B continues, with the basin and foundation work completed and turned over to the contractor for CT erection. The Pump Basin is ready for installation of pumps.

Concrete foundations and walls for the Transformers in the High-Side Switchyard continued to be installed. The Company has experienced capacitor failures in the Switchyard and an investigation is underway to determine the cause (under warranty).

The Company reported that the Unit 2 Steam Generators A & B and the Pressurizer were received on site. Approximately 85% of the major equipment for Unit 2 has been delivered. Major equipment is considered as any equipment with a cost of \$10 million or greater. Also, the Unit 2 PRHR heat exchanger was returned to the equipment manufacturer to install a Supplemental Restraint Bar that was a result of a design enhancement. The Squib Valves were redesigned and successfully passed the submergence qualification testing. Additional full flow and functional testing of other components are continuing.

Unit 3

The Company reported the critical path for Unit 3 remains the fabrication of the SB panels supplied by NNI and continues to run through successful fabrication and setting of CA20 followed by the installation and completion of CA01, CA03 and the SB.

- Rebar work continues in support of the first layer of concrete to be placed above the Unit 3 NI basemat to form the AB Walls which are in turn the SB foundation. Four of 167 SB panels have been delivered to the site from NNI.
- Four submodules forming CA04 were upended and fit issues are being corrected.
- The installation of rebar and placement of concrete continued for sections of the AB, and backfill work continued around the exterior of the NI.
- The first layer of concrete inside the CV is in place.
- Work continued on the assembly of CV Ring 1 and welding of the vertical seams of the first 3 courses of CV Ring 2 was completed.
- CT 3A is essentially complete. Structural work for 3B CT is approximately two-thirds complete. Work is underway for the Pump Basin for the CTs.
- Placement of fill concrete continued beneath the TB. Rebar, piping and other embedments were installed in the TB mudmat in preparation for pouring the TB basemat.
- The Company reported that the Core Makeup Tanks 1 and 2 were delivered to the site and that approximately 30% of the Unit 3 major equipment has been delivered to the site.

The Company reported that several Information Technology Systems were continuing to progress. The site fiber optic cable system back bone for the Units is complete. The Configuration Management Information System ("CMIS") completed two demonstration runs to test CMIS workflow routing. Work Management System is expected to begin module testing in the second quarter of 2015.

Photographs of construction activities during the review period are shown in Appendix B.

NND Training Activities

The Company and Contractor conducted Integrated Systems Validation ("ISV") testing in support of developing the Plant Reference Simulator ("PRS"). This testing is required by the NRC to validate the simulator for use in the Operator Licensing Program. The Company is working with the NRC to certify their simulator as a Commission-Approved Simulator, ("CAS"), which will allow the early use of the simulator in the upcoming initial NRC Operator Examinations. When achieved, the CAS will be used to support the licensing of the first operator training class scheduled for later in the year.

Transmission

In 2011, SCE&G entered into a contract with Pike Electric, LLC for the permitting, engineering and design, procurement of material, and construction of multiple transmission lines and associated facilities related to the Units.

Map 1 shows the new transmission lines and facilities supporting the Units. The transmission lines are represented by the corresponding line color indicated below:

Green Line:

VCS1-Killian Line is complete and energized.

Red Line:

VCS2- Lake Murray Line No. 2 is complete and energized.

VCS2-St George Line No. 1 will be energized when the remaining St. George segment (Purple Line) is complete.

Purple Line:

VCS2-St. George Lines Nos. 1 and 2 are currently under construction between Lake Murray and St. George. This work will progress through the build out of the Saluda River Substation which is scheduled to be completed in August 2015. The remaining segment will travel from the Saluda River Substation to the St. George switching station, which is scheduled to be complete in June 2016.

Yellow Line:

The portion of the VCS2-St. George Line No. 2 segment between VCS2 and the Lake Murray substation is complete.

Blue Line:

VCNS Lines to connect Unit 1 Switchyard with Units 2 and 3 Switchyard are complete and energized.

Licensing and Inspection Activities

Federal Activities

SCE&G has identified the need to submit numerous License Amendment Requests ("LARs") to the NRC. A LAR is the process by which a licensee requests changes to the COL issued by the NRC. The licensee may seek a Preliminary Amendment Request ("PAR") to accompany all LARs. PARs allow the licensee to continue with construction at its own risk while awaiting final dispensation of the LAR. The Company filed two new LARs with the NRC and two were approved. A table of LARs submitted to the NRC, and accompanying PARs, if also submitted, is attached as Appendix C.

Status of LARs

Total	Approved	Under Review
45	28	17

The NRC conducts routine site inspections to monitor construction progress. The NRC issued its 4th Quarter Integrated Inspection Report. Two Green Non-Cited Violations were documented. A Green finding is the least significant in the NRC Construction Reactor Oversight Process. Both findings were related to Design Control issues. The NRC also sent a three-member NRC Special inspection team to review the events of a coring operation that resulted in minor damage to the Unit 2 CV. Results of their investigations are provided in the "Notable Activities Occurring after March 31, 2015," on page 18 of this report.

State Activities

There were no state licensing activities during the review period.

Approved Budget Review

ORS's budget review includes an analysis of the 1st quarter 2015 capital costs, project cash flow, escalation and Allowance for Funds Used During Construction ("AFUDC").

Capital Costs

To determine how consistently the Company adheres to the budget approved by the Commission in Order No. 2012-884, ORS evaluates 9 major cost categories for variances. These cost categories are:

1. Fixed with No Adjustment
2. Firm with Fixed Adjustment A
3. Firm with Fixed Adjustment B
4. Firm with Indexed Adjustment
5. Actual Craft Wages
6. Non-Labor Cost
7. Time & Materials
8. Owners Costs
9. Transmission Projects

On March 12, 2015, SCE&G filed a Petition with the Commission in Docket No. 2015-103-E seeking approval to update the construction milestone schedule as well as the capital cost schedule for the Units. This Petition includes incremental capital costs that total approximately \$698 million (SCE&G's portion in 2007 dollars); of which \$539 million are associated with these delays and other contested costs. The total project capital cost is now estimated at approximately \$5.2 billion (SCE&G's portion in 2007 dollars) or \$6.8 billion including escalation and AFUDC (SCE&G's portion in future dollars). The cumulative project cash flow amount projected to be spent on the Units by December 31, 2015 is \$3.7 billion.

The capital cost estimates presented in SCE&G's Quarterly Report are based on SCE&G's Petition. Therefore, until the Commission issues an order in response to SCE&G's Petition, ORS will not have the ability to provide complete updates on the status of the approved budget.

Annual Request for Revised Rates

Pursuant to the BLRA, SCE&G may request revised rates no earlier than one year after the request of a Base Load Review Order or any prior revised rates request. On May 29, 2015, SCE&G filed its Annual Request for Revised Rates (Docket 2015-160-E) with the Commission requesting a retail revenue increase of approximately \$70 million (or approximately 2.78%).

Table 4 shows a summary of SCE&G's Revised Rate Filings with the Commission.

Table 4:

<i>SCE&G Revised Rate Filings</i>					
Docket No.	Order No.	Requested Increase	ORS Examination	Approved Increase	Retail Increase
2008-196-E	2009-104(A)	\$8,986,000	(\$1,183,509)	\$7,802,491	0.43%
2009-211-E	2009-696	\$22,533,000	\$0	\$22,533,000	1.10%
2010-157-E	2010-625	\$54,561,000	(\$7,260,000)	\$47,301,000	2.31%
2011-207-E	2011-738	\$58,537,000	(\$5,753,658)	\$52,783,342	2.43%
2012-186-E	2012-761	\$56,747,000	(\$4,598,087)	\$52,148,913	2.33%
2013-150-E	2013-680(A)	\$69,671,000	(\$2,430,768)	\$67,240,232	2.87%
2014-187-E	2014-785	\$70,038,000	(\$3,800,000)	\$66,238,000	2.82%
20155-160-E	Pending	\$69,648,000	Pending	Pending	Pending

Additional ORS Monitoring Activities

ORS continually performs the following activities, as well as other monitoring activities as deemed necessary:

- Audits capital cost expenditures and resulting AFUDC in Construction Work in Progress
- Reviews invoices associated with the Milestone Schedule
- Performs weekly on-site review of construction documents
- Attends on-site Plan of the Day meetings with Project Managers
- Attends on-site planning and scheduling meetings with Area Managers
- Participates in monthly on-site observations of construction activities and progress
- Holds monthly update meetings with SCE&G
- Meets quarterly with representatives of the Consortium
- Attends NRC Public Meetings regarding SCE&G COL and other construction activities
- Visits vendor fabrication facilities

Milestone Invoices

The following milestones invoices were reviewed for completeness.

- Milestone 102, Unit 2 Steam Generator at Port of Entry,
- Milestone 104, Unit 3 Pressurizer Hydro Test,
- Milestone 119, Unit 3 Main Transformers Fabricator Issued Purchase Order for material.

Offsite Visits

ORS visited the CB&I Laurens Manufacturing Facility ("CB&I Laurens"), in Laurens, South Carolina which fabricates piping and mechanical equipment to be installed in Unit 2 and Unit 3. Company personnel were in attendance and an overview of the CB&I Laurens Quality and Production processes was provided. The briefing was followed by a factory tour, where we observed several components being completed and a number of units loaded and ready for delivery to the site.

Construction Challenges

Based upon the information provided by the Company in its Quarterly Report, as well as information obtained via additional monitoring activities, ORS identifies several ongoing construction concerns that create risk to the on-time completion of the Units. ORS continues to monitor these areas closely.

Revised Schedule

The Units are proceeding based on the revised SCDs for Unit 2 of June 19, 2019 and Unit 3 of June 16, 2020, although SCE&G has not formally accepted these dates and will continue to explore mitigation and further negotiations. ORS repeats its concern that it is important to the successful completion of the Project that the schedule and cost estimates be formally finalized and fully implemented. Continued negotiations over these issues may divert management attention away from concentrating on the successful completion of the Project. This is borne out by SCE&G's statement in their Quarterly Report that the Consortium has already advised the Company that the SCDs have changed to August 10, 2019 for Unit 2 and May 28, 2020 for Unit 3.

Structural Modules

As identified in previous ORS reviews, one of the most significant issues related to the construction of the Units remains the continued inability of Chicago Bridge & Iron - Lake Charles ("CB&I-LC") and the other sub-contracted module fabricators to reliably and predictably meet the quality and schedule requirements for fabricating and delivering the submodules, including the associated quality-related documentation. However, significant progress was made in this area.

Welding on the Unit 2 CA01 module was nearing completion in the MAB and the module should be ready for setting in the CV. However, delays in pouring of concrete for Layer 3 inside the CV due to issues relating to the licensing basis code compliance of weldable couplings, as further discussed in the "Notable Activities Occurring after March 31, 2015," on page 18 of this report, may further delay the setting of CA01. Unit 2 module CA05 was set in the CV and work continues on its final alignment and installation. In addition, all sub-modules of Unit 2 CA02 are on-site and are now under assembly in the MAB with 5 of the 5 upended and ready for welding.

Metal-Tek SMCI in Lakeland, FL continued fabrication of the Unit 2 CA03 sub-modules and Unit 3 CA03 and CA04 sub-modules, and had their first delivery to the site. One of the seventeen sub-modules for Unit 2 CA03 and four of the five sub-modules for Unit 3 CA04 have been delivered to the site, along with their associated Certificates of Conformance. Work was underway to assemble and align the Unit 3 CA04 module. However, due to poor quality and schedule performance, the fabrication of Unit 3 CA03 sub-modules has been transferred from SMCI back to CB&I-LC.

Work appears to be progressing well at Toshiba/IHI on the fabrication of the Unit 3 CA01 sub-modules with 2 of 47 delivered to the site. Oregon Iron Works has now delivered 16 of 72 sub-modules for Unit 3 CA20. In addition, all sub-modules for Unit 2 CA22 from Greenberry in Oregon were delivered to the site and the floor module is fully assembled and ready for set.

Work continued on the installation of the anchor blocks for Unit 2 module CA20 in the AB with approximately three quarters of them installed. However, the north wall of the already installed module had to be removed and realigned due to concerns about the tolerances of the existing installation exceeding allowable limits. The issue dealing with the capacity of the Heavy Lift Derrick identified in ORS's 4th Quarter 2014 Report regarding the handling of the Unit 3 module CA01 has been resolved and will not impact the construction.

Although the fabrication, delivery, erection and installation still remain a critical issue on both units, progress is slowly being made, but is outside the bounds of the schedule. ORS remains concerned about this issue.

Shield Building Panels

The critical path of both units is now identified as the fabrication and delivery of the SB panels. NNI's performance continues to show improvement with 57 of the 167 Unit 2 panels and 4 of the 167 Unit 3 panels delivered to the site. The first course of Unit 2 panels have been fitted-up and aligned on the special assembly pad and detailed measurements made in preparation for their installation on the top of the AB walls. The second course has also been fitted on the assembly pad in preparation for welding two panel pairs together before installation on top of the first course SB panels. The delay in installation of the SB panels is also associated with resolution of the weldable coupling issue identified in the Structural Module section above. It is very important to the Project that installation of the SB panels begins soon if the Revised Schedule is to be met.

Plant Reference Simulator Software Testing

SCE&G has advised that the ISV testing has been completed on similar software and hardware to that of the PRS, but that certification by the NRC was not expected until the end of 2015 and this does not support the Company's operator training schedule. Therefore, SCE&G is seeking the approval of a CAS as an alternative in order to proceed with operator training and licensing. The Company expects to have NRC approval by Q3 2015.

First-of-a-Kind Testing

SCE&G has identified in its Quarterly Report that some first-of-a-kind equipment and systems testing that were to be performed on the China AP1000 new nuclear units are not acceptable to the NRC, and that additional testing will be required on the Units. This issue may impact the overall costs and schedule. No definitive information has yet been provided in this area, and ORS will continue to monitor progress.

Manufacturing of Major Equipment

The Reactor Coolant Pumps 500 hour endurance test was underway with the modified thrust bearing design and was expected to be completed in June 2015. The Squib Valves with the modified seal design successfully completed their submergence qualification testing, and are undergoing the final environmental qualification tests which are also to be completed by June 2015. However, equipment storage and proper maintenance of stored and installed equipment continue to be a concern, especially for those items that have been on-site for an extended period of time.

Main Switchyard Capacitor Issues

Several mitigating approaches to resolve the capacitor failures and overheating issues have been identified and are being actively pursued, including additional testing by the manufacturer. Although it does not appear that this issue will challenge the plant schedule or adversely impact the overall budget, the plan for resolution needs to be schedules and expedited.

License Amendment Reviews

Numerous LARs will be required to be approved by the NRC. There have been 45 filed with the NRC thus far with 28 approved and 17 pending review. Several are approaching the required approval date which could delay construction if they are not approved by the NRC. ORS will continue to monitor LAR status and progress.

Cyber Security

The continuing issues with cyber security compliance are a source of concern for the Project and for ORS. Phase II of this program has now been well defined and an estimate of \$18.8 million has been submitted by SCE&G as part of its filing to the Commission. However, this cost is contingent on sharing the cost with the Vogtle plants, and an agreement with Southern Nuclear Company has not yet been reached. In addition, the potentially significant issue of vendor compliance with cyber security requirements (now identified as Phase III) has not yet been adequately addressed and the concern is that there may be hardware or software modifications to equipment already on-site and that this may adversely impact the plant start-up schedule. Full resolution of this issue will be monitored by the ORS.

Construction Productivity

SCE&G has identified in its Petition that the low productivity of the construction work force has increased the cost of the Project. Corrective measures have been identified to improve this productivity, but the impact of these corrective measures is not yet known. ORS has been concerned with this issue for some time, but it was not definitively apparent until the revised budgets were formulated. Low productivity could also affect schedule performance.

Notable Activities Occurring after March 31, 2015

The BLRA allows SCE&G 45 days from the end of the current quarter to file its Quarterly Report. Items of importance that occurred subsequent to the Review Period are reported below.

NRC Notice of Violation

On April 20, 2015, the NRC issued a letter (EA-14-085) to CB&I with a Notice of Violation and proposed imposition of a civil penalty of \$11,200 as a result of NRC Investigation Report No. 2-2013-024. A copy of the cover letter may be found in Appendix E.

NRC Special Inspection Results

The NRC followed-up with the results of its investigation of the February 9th event where, CB&I workers were core drilling the concrete floor inside the Unit 2 CVBH. In the process, CB&I cut some safety-related rebar and damaged the Unit 2 CVBH. The damage was confirmed on February 12th when the hole was examined using a borescope. The NRC concluded the inspection with no cited violations, but indicated the potential for two Green Non-Cited Violations related to reporting and review and verification of field configuration for design control processes. The minor damage was repaired and the additional dowels that were required were properly installed to the correct depth and configuration. On June 10, 2015, the NRC issued its final report concerning the CVBH damage incident to the Company. The NRC Letter referencing the report may be found in Appendix F.

Petition Settlement Agreement

On June 29, 2015, a Settlement Agreement was provided to the Commission under Docket NO. 2015-103-E, representing an agreement between SCE&G, ORS and the South Carolina Energy Users Committee concerning SCE&G's Petition. The SCE&G Settlement Agreement announcement may be found in Appendix G of this report, and is subject to approval by the Commission under the referenced docket.

Weldable Coupling Issue

Issues regarding the licensing basis code compliance of weldable couplers have been identified and are delaying the concrete pour of Layer 3 and 4 in the CV until they can be resolved with the NRC. The licensing basis was established using the 1992 AWS Code; however, the Consortium applied AWS D1.1-2000 criteria for structural welds. A difference exists between these two welding codes, and SCE&G has advised that resolution will require a LAR submittal and a PAR from the NRC in order to reduce further delays to construction. This approval is being pursued with the NRC.

Unit 3 Completed Milestones

On July 7, 2015, SCE&G announced the completion of two major milestones on Unit 3: the setting of CA04 (Reactor Vessel Structural Module) and the delivery of the Unit 3 Reactor Vessel to the site. The announcement may be found in Appendix H of this report.



C. Dukes Scott
Executive Director

STATE OF SOUTH CAROLINA
OFFICE OF REGULATORY STAFF

1401 Main Street
Suite 850
Columbia, SC 29201

December 14, 2015

Byron W. Hinson, Director
Rates and Regulatory Services
SCANA Services, Inc.
220 Operation Way MC C111
Cayce, SC 29033



Dear Mr. Hinson,

This summary is based on the following information: (1) ORS review of construction documents provided by SCE&G during the month of November 2015 (2) ORS review of the Agreement dated 10-27-15 among SCE&G, Westinghouse, and CB&I that outlines the terms and conditions for the planned assumption of all responsibilities for the EPC Contract by Westinghouse "Agreement" (3) ORS tour of the construction site on 11-17-15 and (4) ORS review of information obtained from the regular monthly meeting with SCE&G NND management and the ORS held on 11-17-15 and 11-18-15.

Certain provisions of the Agreement should be revisited and revised to provide more favorable terms to SCE&G and to the rate payers. The following comments are directed toward the referenced corresponding paragraphs in the Agreement:

- Paragraph 2- Adequate detail is not provided in the Agreement to assess the efficacy of the option for the Fixed Price of \$6.082 B (100%) for the remaining work performed beyond 6-30-15. Additional information is needed.
- Paragraph 3- Currently, the justification provided to increase the Fixed Price Contract Price by \$300 M (100%) is insufficient. The back-up information provided in the reference Exhibits does not provide sufficient detail, and the relationship of this increased amount to that approved in the recent PSC order is not clear.
- Paragraph 4- It is not clear why the issues outlined in Exhibit C could not be resolved as part of the Agreement and what impact these issues may have on the total cost of the Project once they are resolved.
- Paragraph 8- The provision to defer the \$250M (100%) /unit penalty if the Federal Tax Credit is extended removes a very strong incentive to complete the work on the current schedule.
- Paragraph 10- The bonus should be reduced if the Federal Tax Credit is extended and the Project is delayed beyond the current planned completion dates.

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The other revised provisions contained in the Agreement are positive and important steps that should advance the Project and improve the performance, as well as provide more financial surety and reduce the schedule and cost risk to SCE&G. However, the current plan to utilize Fluor solely as a contracted construction manager with no direct responsibility for the craft labor causes concern.

With regard to the construction status of the Project:

1. The construction schedule for Unit 3 has not been adequately integrated considering proper sequencing of precursor activities. In addition, the required resources have not been adequately assessed, especially with regard to the impact of delays in the construction of Unit 2 and how this will impact the staffing of Unit 3. The current schedule utilizes overly optimistic assumptions with regard to acceleration of module deliveries and erection, construction productivity improvements on all commodities, and the acceleration of testing and start-up activities. SCE&G needs to reassess the Unit 3 schedule with the EPC Contractor.
2. Delayed structural module fabrication and delivery continue as a critical issue for the Project. Improvements are needed from all subcontractors and the continued role of CB&I - Lake Charles needs immediate attention and resolution.
3. The required mitigation approach to accelerate the Unit 2 and Unit 3 Shield Building panels from Newport News Industrial was not finalized, and it is not clear that the approach is still viable. SCE&G needs to determine whether mitigation is still an option and determine the impact on the Project.
4. Some confusion may exist about the selected fabricator for the air baffle and tension ring portion of the Shield Building. This issue is one of the most complicated areas on the entire Project and is currently on the critical path for project completion. SCE&G needs to resolve this responsibility and ensure the fabrication is expeditiously proceeding with a suitably qualified subcontractor.
5. The increased labor productivity rates necessary to attain the completion dates for the Project have not been realized, and no discernable progress has occurred. Some additional delays can be expected in the transition relating to CB&I's departure and Fluor coming up to speed; therefore, it is difficult to understand how these delays, coupled with the continued below-par productivity rates, support the Project completion dates. This issue will need to be addressed by SCE&G once the transition is completed.

Sincerely,



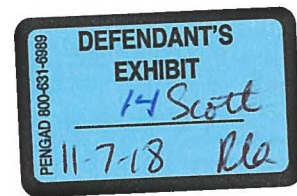
C. Dukes Scott
Executive Director

From: Gary Jones
Sent: Saturday, April 2, 2016 12:55 PM
To: Scott, Dukes
Subject: Summary of March 29 & 30, 2016 VCS Visit
Attachments: Summary of March 29 and 30, 2016 Visit to VCS Site.docx

Dukes,

Allyn indicated that it was ok to forward this to you via e-mail, so I have attached my summary for your information and use.

Gary C. Jones
Telephone: 773-665-7402
Mobile: 312-402-2954
gary@jonespartners.net



Jones Summary of March 29 & 30, 2016

Visit to WCS Site

The following provides my comments and recommendations resulting from the site tour, meetings with senior project personnel and document reviews performed at the VCS 2 & 3 construction site on March 29 & 30, 2016:

1. We met ~~on~~ March 29, 2016 for the first time with Carl Churchman, Westinghouse Vice President and Project Director and Jeff Hawkins, Fluor Vice President and Site Director, to discuss the status of the project and their view of the transition progress. They provided informative and candid responses to our questions and indicated they recognized the major issues confronting the project and were working diligently to resolve them. Among the major areas discussed were:

- a. Fluor will assume direct responsibility for the craft labor and support personnel beginning April 2 and complete the process on April 4, 2016. This means that all these personnel will be Fluor employees, even changing to Fluor tan colored hardhats.
- b. All seven (7) Fluor Area Managers are in place and functioning and the construction is now an area based concept with the Area Manager responsible for all construction work within his designated area. I view this as a positive change, and is the concept used on most major large construction projects.
- c. Fluor will now be in charge of commodity procurement and will be responsible for ensuring the correct material is available when needed for construction. This is an area that was greatly in need of improvement, and it is hoped that Fluor will resolve the many issues that hindered construction progress in the past.
- d. Westinghouse and Fluor are reviewing the major site processes and procedures and instituting improvements in these areas. They expect to have all these reviews completed and revisions in place by June 2016. They are focusing on several important areas, such as welding, first and expect improvements in these areas within the next month.
- e. They have developed a productivity improvement plan that has set goals based on overall sustained project completion of 1%/month by the end of June, 2%/month by the end of the year and 3%/month by the end of March 2017. They plan to institute a two-shift, 10-hour/day, six day/week work schedule also. We will closely monitor this progress.

f. They were holding a summit meeting with all module suppliers on March 30, 2016 with the goal of getting them all on-board with the need to accelerate their production and delivery of quality sub-modules to the site. It is hoped this will have a positive effect on this critical path activity.

g. They have completed their assessment of lead CB&I construction personnel and advised that about 200 personnel were terminated based on performance. Fluor advised that they were using their world-wide network to replace these personnel and to expand the labor force at VCS. We should see a significant increase in site staff soon.

2. SCE&G advised that due to concerns with the financial stability and viability of Westinghouse's parent company, Toshiba, they are pursuing a "design information escrow" with Westinghouse. This would be a depository for all Westinghouse design information, computer programs and other design information which would be turned over to SCE&G should Westinghouse financially fail. The cost of this escrow account is not yet known, but I would expect it to be in the tens of millions of dollars. I consider this to be a prudent undertaking in light of the uncertainty associated with Toshiba's current financial situation.

3. Sub-module delivery and erection continue to be a major cause of delay in construction progress. We did see some good progress on the fabrication of Unit 2 CA03 this month; however, the concrete fill of Unit 2 CA20 was again delayed and is now scheduled to begin on April 2, 2016. Delivery of Unit 3 sub-modules from all vendors continues to be delayed.

4. As a general observation, the work activity level has definitely increased at the site and progress is becoming more visible than previously witnessed. The attitude of the workers has also seemingly improved and was manifested by many friendly greetings on our tour where previously this was rarely the case. It is hoped that this can be carried through to improve the work environment and increase productivity.

In summary, while significant challenges to the project and to the transition remain, it appears that Westinghouse and Fluor have added the appropriate leadership to the project to affect the required changes and improve project processes and performance. However, the true impact of these changes still remains to be seen, and will need to be closely monitored over the next several months.



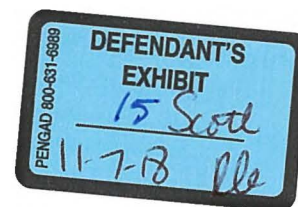
C. Dukes Scott
Executive Director

STATE OF SOUTH CAROLINA
OFFICE OF REGULATORY STAFF

1401 Main Street
Suite 850
Columbia, SC 29201

May 13, 2016

Mr. Kenneth R. Jackson
Senior Vice President
Economic Development, Government and Regulatory Affairs
SCANA Services, Inc.
220 Operation Way
Mail Code D309
Cayce, SC 29033-3701



Dear Mr. Jackson,

The following provides the ORS' comments and recommendations resulting from the site tour, meetings with senior site personnel, and document reviews performed at the VC Summer Units 2 & 3 construction site;

1. The ORS met with the lead Westinghouse Electric Company (WEC) project scheduling staff for the first time since Fluor became involved in the project. This meeting allowed the ORS to review the current revised integrated project schedule in more detail. The ORS now has a better understanding of the assumptions and bases of the schedule and the process of its development over the past few months. We learned that the initial schedule presented by WEC in August 2015 had arbitrarily held constraints that resulted in an unreliable and unrealistic depiction of the schedule for the remaining work. SCE&G and the on-site WECTEC project schedulers have worked to refine and accurately represent the remaining work and the logical ties among the work activities, as well as to reduce the number of arbitrary constraints. The ORS also obtained a better understanding of the documentation available to help us understand the schedule, including a more detailed Project Plan-of-the Day package. However, the ORS remains concerned that the schedule still needs refinement and has not yet received a complete detailed review and revision by Fluor that includes the resources needed to complete each task. This review will not be completed until the third quarter of this year. By that time, the ORS is concerned that additional delays may be identified in the project completion dates, especially on Unit 3.

The ORS also met with SCE&G staff who produced documents to support senior SCANA/SCE&G executives during negotiations with WEC that culminated in the October 2015

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E-mail: dukes.scott@regstaff.sc.gov ♦ Website: <http://www.regulatorystaff.sc.gov>

changes to the Engineering, Procurement, and Construction Contract Agreement (Amendment). This meeting provided additional insight into the financial basis of the final settlement and allowed QRS to gain a better understanding of the relationship between the project completion costs presented in the Amendment and those previously represented. However, costs shown in the Amendment are the result of a negotiation and do not represent a detailed accounting of the costs associated with each and every remaining project activity. Thus far, no rigorous and detailed comparative roll-up of the final costs is available. This presents a challenge as ORS evaluates and assesses the project costs presented in the Amendment.

2. With regard to construction progress on the project:

Positives

a. SCE&G completed the concrete fill within the walls of the Unit 2 CA20 structural module on April 5. As the first concrete fill of a major structural module on the site, completion of this item is a significant accomplishment.

b. All 17 submodules on Unit 2 CA03 are now standing upright on the plenum in the fabrication tent on site, and final welding and outfitting of the module are underway. The module is on schedule for its placement in the containment vessel in June.

c. Newport News Industrial has made good strides in meeting their most recent schedules for delivery of Shield Building (SB) panels, and the erection of Course 4 of the SB panels has been completed at the construction site.

d. Progress has been made on the on-site fabrication of the Unit 3 CA20 module subassemblies 1 & 2, in the Module Assembly Building (MAB) that supports a July 2016 placement date. All 72 submodules for this module have been delivered to the site, and subassemblies 3 & 4 have already been placed in the Unit 3 Auxiliary Building.

e. Progress was evident in the MAB on the Unit 3 CA01 module. Six submodules were erected on the plenum in a single week in April, which represents the highest production yet on this activity.

f. Unit 3 Containment Vessel (CV) Ring # 1 installation was completed on April 13.

Concerns

g. SCE&G received notification on April 21 from WEC of a quality issue with Mangiarotti components already delivered to the site. The issue involves 11 of the 26 sub-suppliers of safety-related pressure boundary materials and may impact the accumulator tanks, core make-up tanks, pressurizers, Passive Reheat Removal heat exchangers, flued heads, and guard pipes. An action plan is due by May 31, and this issue may be a 10CFR Part 21 reportable infraction. This problem is significant because it may delay the installation of accumulator tanks. These tanks were due to be installed in the next couple of weeks and were to be the first major Nuclear Steam Supply System components installed in the plant.

h. The repairs to Turbine Building Bay 1 relating to an unacceptable concrete cold joint have been significantly delayed and are not progressing well. The hydro-lasing contractor is not meeting his promised productivity and may not be able to recover or improve. SCE&G is pursuing alternate paths to resolve this issue,

i. Progress on the Turbine Buildings continues to be significantly behind schedule (up to 6 months late in some cases), primarily due to craft labor shortages and diversion of labor to Nuclear Island work, SCE&G is working with Fluor and WEC TEC to address this issue.

j. Continuing commodity shortages have resulted in delays. Fluor is to assume greater responsibilities in commodities purchasing and control, and SCE&G hopes to see improvements soon.

k. Construction labor productivity rates and overall productivity improvements have not yet significantly increased, although the activity levels have increased. Craft labor manpower increases will need to occur soon if there is to be a chance of meeting project completion dates. Process changes in several areas such as welding, procurement, and work-package preparation and closure will also soon need to be implemented to meet completion schedules.

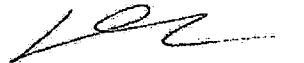
L. Progress in completing the so-called "Reactor Containment", areas of the Unit 2 Auxiliary Building that support the SB panels has been problematic, primarily due to design changes and commodity shortages. This area is very near critical path and needs additional focus and effort.

m. Mechanical module delivery continues to fall behind schedule. As a result, SCE&G and WEC TEC are considering moving fabrication to the site. While this may

improve quality and better support construction, it will increase the demands on craft labor on site, and may increase project costs.

More activity and project progress were visible and apparent during this site visit; however, challenges remain and the full benefits of the transition to the new contracting arrangements are yet to be realized.

Sincerely,



C. Dukes Scott

Cc: Byron W. Hinson, Director



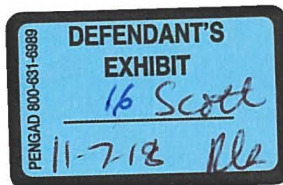
C. Dukes Scott
Executive Director

STATE OF SOUTH CAROLINA
OFFICE OF REGULATORY STAFF

1401 Main Street
Suite 850
Columbia, SC 29201

June 30, 2016

Byron W. Hinson, Director
Rates and Regulatory Services
SCANA Services, Inc.
220 Operation Way
MC C111
Cayce, SC 29033-3701



Dear Byron,

The ORS is currently in a heightened state of concern regarding the construction cost overruns and schedule delays for V.C. Summer (VCS) Nuclear Units 2 & 3 (the Units).

Westinghouse and Fluor continue to struggle with craft labor productivity. While a slight improvement was shown during the first three months of Fluor's tenure on site, the most recent two months have trended negatively, with a performance factor now hovering around 2.0. This score indicates that only about half the work planned is being done for the labor hours expended. Furthermore, the project has not attained the improved productivity factor of 1.15 that formed the basis for the approved schedule and budget in Order No. 2015-661. Fluor's efforts to implement process changes through their Functional Area Assessments and subsequent improvement recommendations appear to be a step in the right direction; however, the assessments and the associated implementation of identified improvements are moving much too slowly. This effort needs to accelerate dramatically if the project is to meet its scheduled completion dates.

Fluor's recruitment efforts to increase craft labor are not meeting the targets required to support construction, and the year-end goal of increasing on-site craft labor by 1,000 is in jeopardy. Fewer applicants than needed are applying, and rejection rates are higher than expected due to a number of factors including lack of qualifications, failed background checks, and no-shows. Candidates are also taking other jobs they consider more attractive. In addition, the attrition rate among existing craft employees is higher than expected. The higher rate is due to terminations for continued absenteeism, resignations for other employment, and other factors. This shortage of labor also places the substantial completion dates in jeopardy.

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Although not yet reflected in the latest project progress reports, concern exists about the recent upturn in job-related injuries and incidents. In some instances, this trend appears to be the result of a declining safety culture attitude among the craft workers, along with uncertainty surrounding the new project management structure and the divisions of responsibility. Issues of this type have the very real possibility of resulting in a work stoppage and need to be immediately addressed and resolved.

The lack of availability of key commodities continues to plague the project and result in construction delays. Note that this issue is not tied to major components, as most of these are now on-site far ahead of their actual construction need date. The commodities in question are rebar, welding rod, standard structural steel, bolting, lubricants, steel plates, Nelson studs, and other standard construction commodities. These shortages are the result of Westinghouse's "just-in-time" approach to the ordering and delivery of these commodities. This approach has proved to be ineffective as the components are not available when required. On large construction projects, such commodities are routinely stocked in sufficient quantity to ensure they do not delay construction. Our consultant states that he has never worked on a nuclear project that was delayed by the lack of availability of standard rebar. At VCS, standard rebar unavailability has resulted in construction delays of critical path activities.

Other procurement issues, primarily associated with the negotiation of subcontracts and change orders, are becoming critical. Despite the fact that ten issues requiring change orders were identified in Exhibit C of the October 2015 Agreement, SCE&G and Westinghouse have been able to reach agreement on only a few of these issues in the intervening eight months. In addition, delays in the full authorization of several key subcontracts are putting the substantial completion dates of the project at risk.

Consistently meeting the construction schedule continues to be a significant issue for the project. This area must improve if any credibility is to be assigned to the current substantial completion dates and associated mitigation strategies that must be implemented in order to bring the plant to completion.

Module fabrication and delivery continue to drive the critical paths for the project; however, the focus is gradually shifting from structural modules to mechanical modules and structural steel modules in the Nuclear Island. In addition, the transition areas at the Shield Building to Auxiliary Building roof and the air inlet/tension ring areas of the upper Shield Building are becoming increasingly important. Contracts need to be finalized, and fabrication releases need to be expeditiously forthcoming in order to avoid schedule impacts. As it is, because these contracts have taken so long to be finalized, these items will be on a very tight schedule with little margin.

Concerns about the schedule also extend to the installation of components such as piping erection, cable raceway installation and cable pulling, instrumentation and tubing installation, HVAC equipment and ductwork installation, and wiring and termination. Historically, these areas have been the most difficult to complete when constructing nuclear power plants; however, very little of this effort has been completed on the Units. The modular construction methodology may

prove beneficial in this regard, but that remains to be seen. The tendency toward slow installation exhibited thus far is especially concerning in light of the project's inability to meet the construction schedule to date. Sustained installation rates will need to be demonstrated before the ORS has confidence in the project's ability to complete these areas in a timely manner.

Design changes continue to adversely affect fabrication and construction schedules. The number of design changes appears to be high considering the design completion status that the ORS understood in the early stages of the project. The factors driving these changes need to be further investigated, and additional management controls need to be established with the goal of reducing the frequency of design changes to only those that are absolutely required.

Operational readiness is also emerging as a concern. It is not clear at this point whether the required number of operations staff will be ready to perform the required testing and start-up support activities. The operational readiness schedule has not yet been incorporated into the integrated project schedule, so the true impact is not yet known. In addition, questions remain regarding the availability of the final Plant Reference Simulator in time to support operator training and procedure completion. Testing and operations procedure completion in time to support fuel load and commercial operation are also a concern.

In light of these concerns, ORS offers the following observations. SCE&G may benefit from evaluating a contract structure that provides the utility with more active involvement and control, rather than assigning all control to Westinghouse through the Option. The addition of Fluor as a subcontracted construction manager is a good step; however, Westinghouse still retains all control as the sole contractor. Consequently, Westinghouse controls the project budget, the majority of project procurement, and makes decisions about which methodology to use when problems arise. This is not an ideal arrangement. A better arrangement would include a contract that emphasizes partnership.

The process changes identified through Fluor's Functional Area Assessments need to be accelerated. If properly implemented, these changes should result in improved productivity by the workforce. In addition, the impact of these changes should be quickly assessed and any further improvements must be implemented expeditiously. The first priority should be the implementation of the so-called "Min/Max" approach to purchasing commodities so that construction delays are not caused by the lack of construction commodities which are readily purchased.

The design change process also needs further management review and control. Changes should be assessed as to absolute need and impact on construction, and changes not meeting these requirements should not be implemented. SCE&G should be a part of this assessment process.

SCE&G and Westinghouse also need to come to an agreement on the milestone payment schedule soon. All necessary management and executive focus required to accomplish this goal must be utilized.

Any approach to this project that totally excludes Westinghouse is unlikely to be successful for the project. Westinghouse has key design responsibilities for all safety-related and almost all other key systems and components. In addition, they are the primary designers for the physical plant itself, including the structural and mechanical modules. Westinghouse must be a part of the

project if there is to be any hope of successfully completing it. In some areas, a more experienced architect/engineer might provide needed assistance which could be pursued in conjunction with Westinghouse. However, no successful scenario exists that totally excludes Westinghouse's participation.

In the case of Unit 2, ORS believes that, while the date in the filing of August 31, 2019 is unlikely to be met, it is possible that Unit 2 may still be able to qualify for the Federal Production Tax Credits that expire on December 31, 2020. However, completing Unit 2 in time to receive the Federal Production Tax Credits will require improvements to the current construction methodology.

For Unit 3, ORS has a much lower confidence level that this Unit can be completed within the 18 month window. ORS has no confidence that Unit 3 can meet the current Federal Production Tax Credit deadline of December 31, 2020. This finding is based on the lack of performance in multiple areas cited in the preceding section of this letter. In addition, Fluor has not completed their schedule assessment and has not prepared a resource loaded integrated project schedule. This makes the validity of the current schedule highly suspect.

Sincerely,



C. Dukes Scott
Executive Director

To: GRIFFIN, IRIS[Iris.Griffin@scana.com]
 From: Stewart, Jimmy W.
 Sent: Tue 2/7/2017 8:46:45 AM
 Subject: RE: TODAY - 10:30 AM ET - Perspectives on New Nuclear: A Discussion with the South Carolina Office of Regulatory Staff

 This is an EXTERNAL email. Please do not click on a link or open any attachments unless you are confident it is from a trusted source.

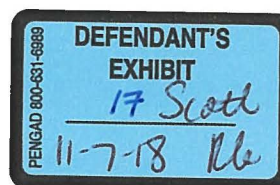
Thank you Iris,

It was a very tough loss for us Falcons fans. Very somber here as well.

I listened to the replay and felt the conversation had a positive tone. Below are the high level points I took from the call. Please let me know if I captured anything incorrectly:

Summary of the call with Dukes Scott and Ellen Powell of the S.C. Office of Regulatory Staff (ORS)

- ✓ ORS represents the public interest in utility matters and also represents the interest of utility companies to assist them with access to capital markets.
- ✓ ORS believes the regulatory environment in S. C. is good and well balanced. There are no legislative issues related to utility regulation on the current S. C. legislation agenda.
- ✓ In response to a question about current and future priorities at the S.C. Commission, ORS said the Commission is a judiciary body, and activism related to setting priorities is limited for them. The Commission sets policies within the cases that are in front of them.
- ✓ The ORS follows and provides testimony related to potential reviews or changes to the Base Load Recovery Act (BLRA).
 - o There are no changes currently being reviewed
 - o Any potential changes will be prospective
 - o If there were to be a review, return on equity and burden of proof would be the two main issues.
- ✓ ORS is actively promoting the completion of Summer Units 2 and 3.
- ✓ ORS said the recent settlement with the contractor was very helpful to improve productivity at the site and to have Westinghouse complete both units. The settlement agreement provides support for the contractor.
- ✓ There has been \$7B already invested in the Summer projects, so ORS does not see any way that the co-owners would walk away.
- ✓ ORS said it is very important for SCE&G to stay out of rate cases as agreed to in the settlement and that, in their opinion, there is a "cap" on the amount of rates increases to customers (they mentioned \$150 per retail customer). General rate increases need to be avoided until the units come on-line.
- ✓ ORS believes asking the IRS for Section 174 tax credits is a good way to reduce the impact to retail customers.
- ✓ Risks due to financial issues at Toshiba:
 - o ORS believes that Westinghouse / Toshiba is committed to complete the project.
 - o The fixed price component of the settlement accounts for approximately 81% of total costs. 19% could change due to exceptions and change in law or regulations.
 - o SCEG is actively escrowing IP rights to the AP1000 design. In the unlikely event that Westinghouse cannot fulfill its contractual obligations under the contract, SCE&G believes it can complete the plant.
- ✓ Owners are actively monitoring the hot-functional testing at Sanmen and hoping the issues that



have been identified will not be issues at the Summer site. "Lessons learned"

- ✓ ORS is comfortable that the activity based milestone payments incentivize the contractor and that the settlement agreement provides sufficient protection associated with the Letters of Credit (~\$100M). ORS noted that the company is not making payments ahead of work that is yet to be completed.
- ✓ ORS will be closely watching the Toshiba announcement on February 14th and the start-up progress at Sanmen.
- ✓ When ORS was asked what is important and relevant to them they said that the State of South Carolina remains very positive toward new nuclear and they believe the decision to build Units 2 and 3 will ultimately be seen as the same smart decision to build Summer Unit 1.
- ✓ ORS acknowledged they thought the contractor issues were resolved with the settlement agreement, "then December 27th hit". (Toshiba announcement).
- ✓ ORS does not believe abandonment is a viable option, and they believe Westinghouse will complete the units in accordance with the current EPC contract.

Jimmy Stewart | Manager, Investor Relations | Southern Company
Office 404.506.0747 | Mobile 770.329.1091 | jwstewar@southernco.com



Southern Company

From: GRIFFIN, IRIS [<mailto:Iris.Griffin@scana.com>]

Sent: Tuesday, February 07, 2017 7:34 AM

To: Stewart, Jimmy W.

Subject: FW: TODAY - 10:30 AM ET - Perspectives on New Nuclear: A Discussion with the South Carolina Office of Regulatory Staff

Good morning Jimmy,

I hope you've recovered from that Super Bowl. My husband is originally from Georgia and I have to say there was a somber mood around our house Sunday night and yesterday.

I wanted to give you a heads up that Stephen Byrd and team talked to the Director of our Office of Regulatory Staff yesterday. Overall, the conversation went fine. I'm not sure that there is much that would be applicable to you guys since the discussion largely focused on the SC regulatory environment. But I did want to make sure you were aware in case you started to get some questions. Stephen also distributed a research report this morning summarizing the conversation.

Iris Griffin

VP Finance

SCANA Corporation

220 Operation Way, MC C111

Cayce, SC 29033

Phone: 803-217-6642

From: Stephen Byrd

Sent: Monday, February 06, 2017 10:31 AM

To: GRIFFIN, IRIS <Iris.Griffin@scana.com>

Subject: TODAY - 10:30 AM ET - Perspectives on New Nuclear: A Discussion with the South Carolina Office of Regulatory Staff

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Please note, this call is open to our institutional client base and appropriate Morgan Stanley personnel. Dial-in information should not be forwarded or shared beyond intended recipients.

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Morgan Stanley**CONFERENCE CALL- Perspectives on New Nuclear: A Discussion with the South Carolina Office of Regulatory Staff**

Conference Call

Stephen Byrd **Monday, February 6, 2017**

(212) 761-3865

10:30AM ET

Speakers:**C. Dukes Scott**, Executive Director, South Carolina Office of Regulatory Staff**Allyn Powell**, Manager, Nuclear Programs, South Carolina Office of Regulatory Staff**Host:****Stephen Byrd**, Power & Utilities and Clean Energy industries Analyst, Morgan Stanley

Morgan Stanley is pleased to host the South Carolina Office of Regulatory Staff for a conference call to discuss perspectives on new nuclear. (Speaker biography below)

Key topics:

-New nuclear

- o Risks around Toshiba/Westinghouse financial health
- o Approaches to mitigate schedule delays, cost overruns, and/or contractor financial difficulties
- o Key construction milestones to track
- o Local ratepayer and political sentiment around new nuclear construction

-South Carolina regulatory environment: Commission and Staff regulatory initiatives and priorities, Legislative pursuits relevant for utilities

Dial-in Numbers:

US/Canada Dial-in #: (877) 317-4144

International Dial-In #: (414) 238-0793 or (706) 643-1193

Conference ID #: 66660630

Replay Dial-In Number(s): 800-585-8367 or 855-859-2056

Conference ID #: 66660630

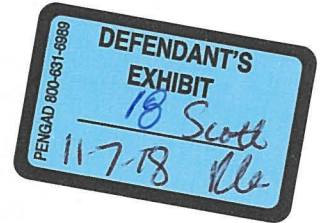
Encore dates: 2/6/2017-2/20/2017**Speaker Biography:****C. Dukes Scott, Executive Director**

Dukes became the first Executive Director of the Office of Regulatory Staff (ORS) in 2004 when the agency was created by Act 175. A native of Orangeburg, South Carolina, Dukes is a graduate of Clemson University where he earned a B.S. He holds a J.D., cum laude, from the University of South Carolina School of Law. In addition to several years in the private

practice of law, he served as Staff Counsel for the Public Service Commission of South Carolina (PSC), Executive Assistant to the Commissioners, General Counsel, and Deputy Executive Director of the PSC. Dukes was then elected as a Commissioner for the PSC (1994-1999). In 1999, he was elected to Administrative Law Judge Seat No. 2, a position he held until 2004. Dukes is a member of Forest Lake Presbyterian Church.

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From: Powell, Allyn <ahpowell@regstaff.sc.gov>
Sent: Wednesday, March 1, 2017 1:00PM
To: Scott, Dukes; Gary Jones
Cc: Edwards, Nanette; James, Anthony
Subject: RE: Letter. Good afternoon. Dukes
Attachments: Forrester Letter draft 3-1-2017 v2.docx



Dukes,

Here's some added language based on our conversation.

Gary,
 Anything to add or change regarding the warranties?

Thanks!
 -Allyn

From: Scott, Dukes
Sent: Wednesday, March 01, 2017 12:35 PM
To: Powell, Allyn <ahpowell@regstaff.sc.gov>; Gary C. Jones (gary@jonespartners.net) <gary@jonespartners.net>
Cc: Edwards, Nanette <nsedwar@regstaff.sc.gov>; James, Anthony <majames@regstaff.sc.gov>
Subject: Re: Letter. Good afternoon. Dukes

I said not to be concerned re the warranty issue. But do you have ant insight?

C. Dukes Scott
 Executive Director
 SC Office of Regulatory Staff
 1401 Main Street, Suite 900
 Columbia, SC 29201
 Office: (803) 737-0805
 Cell: (803) 463-6524
 Fax: (803) 737-1900

On Mar 1, 2017, at 12:03 PM, Powell, Allyn <ahpowell@regstaff.sc.gov> wrote:

Please take a look at this draft and see what you think. I discussed this with Gary.

From: Scott, Dukes
Sent: Wednesday, March 01, 2017 8:48AM
To: Powell, Allyn <ahpowell@regstaff.sc.gov>
Cc: Edwards, Nanette <nsedwar@regstaff.sc.gov>; James, Anthony <majames@regstaff.sc.gov>
Subject: Re: Letter. Good afternoon. Dukes

Thanks

Sent from my iPhone

On Mar 1, 2017, at 8:45 AM, Powell, Allyn <ahpowell@regstaff.sc.gov> wrote:

OK. Gary and I have that call you asked me to set up with Scott at 10:00. I'll try to finish this before that but if I can't I'll send it ASAP after.

From: Scott, Dukes
Sent: Wednesday, March 01, 2017 8:42 AM
To: Powell, Allyn <ahpowell@regstaff.sc.gov>
Cc: Edwards, Namette <nsedwar@regstaff.sc.gov>; James, Anthony <majames@regstaff.sc.gov>
Subject: Re: Letter. Good afternoon. Dukes

Doesn't have to be too detailed.

Sent from my iPhone

On Mar 1, 2017, at 8:40 AM, Powell, Allyn <ahpowell@regstaff.sc.gov> wrote:

Will work on this. I'm assuming this is related to the review letter?

From: Scott, Dukes
Sent: Wednesday, March 01, 2017 8:33 AM
To: Powell, Allyn <ahpowell@regstaff.sc.gov>
Cc: Edwards, Namette <nsedwar@regstaff.sc.gov>; James, Anthony <majames@regstaff.sc.gov>
Subject: Fwd: Letter. Good afternoon. Dukes

Allyn, will you prepare a response for me. I'll deal with the warranty issue. Thanks

C. Dukes Scott
 Executive Director
 SC Office of Regulatory Staff
 1401 Main Street, Suite 900
 Columbia, SC 29201
 Office: (803) 737-0805
 Cell: (803) 463-6524
 Fax: (803) 737-1900

Begin forwarded message:

From: "Forrester, Mike"
<forresterm@sccsc.edu>
Date: March 1, 2017 at 7:06:47 AM
EST
To: "Scott, Dukes"
<Dukes.Scott@regstaff.sc.gov>
Subject: Re: Letter. Good
afternoon. Dukes

Thanks Dukes. I must admit that this causes me great concern. What is the process of SCE&G becoming certified to complete the facility? Do they have the expertise? Who will be liable in the event of a failure or a warranty issue?

From: Scott, Dukes
<Dukes.Scott@regstaff.sc.gov>
Sent: Tuesday, February 28, 2017
2:45:58 PM
To: Mike Forrester; Forrester, Mike
Subject: Letter. Good afternoon. Dukes

«Forrester Letter draft 3-1-2017.docx»

The Honorable P. Michael Forrester

South Carolina House of Representatives
402C Blatt Building
Columbia, South Carolina, 29201

Dear Representative Forrester,

This letter is to follow up on your question regarding SCE&G completing the construction of V.C. Summer Units 2 & 3 should Westinghouse be unavailable to do so.

This question is of concern to ORS as well. I would like to start by reiterating that Westinghouse has indicated to SCE&G that they are committed to finishing the Units. In our conversations with Westinghouse, QRS has observed that Westinghouse continues to actively make changes in an effort to improve the management structure of the project. Westinghouse indicated to ORS staff that January was their best month ever as far as production on the project.

As to the process of SCE&G taking over the project, to our knowledge there is not a certification that would need to occur. SCE&G itself holds the combined construction and operating license from the NRC and the license states that "SCE&G is technically qualified to engage in the activities authorized by this license in accordance with the Commission regulations set forth in 10 CFR Chapter I." The AP1000 design as submitted by Westinghouse was also certified by the NRC, but individual changes during construction are processed as amendments to the license that SCE&G holds, not as amendments to the AP1000 design certification that Westinghouse holds. SCE&G would still have to update numerous procedures and programs with the NRC, or choose to adopt the former Westinghouse procedures as their own and follow them, but this has happened twice already in the project's history so it is not an insurmountable task. It is also not unprecedented. SCE&G previously took over the construction of V.C. Summer Unit 1 as it was approaching completion.

SCE&G does not have the expertise that they need in house. They do, however, have experience with nuclear project oversight. They manage the Unit 1 refueling outages and day to day activities so they are well aware of the NRC's requirements. They would need to engage both an engineering firm (to assist with required NRC studies, construction drawings, future license amendment requests, field construction support and fabrication support) and a construction firm (to execute the construction of the project). Fluor is a construction firm that is currently subcontracted to Westinghouse and is quite familiar with the project. Westinghouse also has a number of contract employees from Bechtel, another major construction firm, who would also be familiar with the project. The engineering source code and the plant design are currently being escrowed, which would give another engineering firm information with which to support the project.

It would be a difficult process and it may well take longer to complete the Units, but ORS's outside expert believes it would be possible.

You also asked a question regarding a failure or warranty issue, ORS is working together with the Electric Cooperatives of South Carolina and an attorney that they have engaged to explore this issue. I don't have a definitive answer on all of these issues at this time. However, the issue of warranties on

equipment will be complicated. One of the key items that SCE&G negotiated in the October 2015 amendment to the EPC Contract was an extension of various equipment warranties. As construction has taken longer than expected, some warranties are expected to expire before start-up. Westinghouse agreed to extend the warranties to 24 months beyond the actual substantial completion date. The number of cases in which they have negotiated these extensions with the manufacturers versus the number of cases in which they are backing up the warranty themselves is unknown.



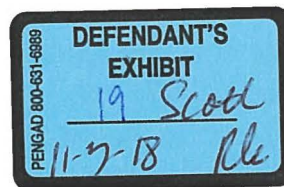
C. Dukes Scott
Executive Director

STATE OF SOUTH CAROLINA
OFFICE OF REGULATORY STAFF

1401 Main Street
Suite 850
Columbia, SC 29201

August 8, 2016

Byron W. Hinson, Director
Rates and Regulatory Services
SCANA Services, Inc.
220 Operation Way, MC C111
Cayce, SC 29033-3701



Dear Byron,

The ORS is still in a heightened state of concern regarding the construction cost overruns and schedule delays for V.C. Summer (VCS) Nuclear Units 2 & 3 (the Units). ORS's most recent analysis, based on the monthly site visit and document review, is outlined below:

1. Construction progress was significantly more visible during this visit than last month. The Unit 2 CA03 module has been set inside of containment. This involved a complicated lift with the Heavy Lift Derrick (HLD) and very precise module placement. The overall setting of the module appears to have been well executed and the lessons learned from both China and Vogtle appear to have been incorporated appropriately. It was disappointing, however, that the scheduled date for this module set slipped several times. This leaves the CA02 module as the remaining major structural module to be installed in Unit 2. In addition, visible progress was seen in the Unit 2 Annex Building and the Unit 2 Turbine Building. The installation of structural steel in the top section of the Turbine Building also has progressed well.
2. Very informative briefings were provided by Carl Churchman (Westinghouse Vice President and Project Director) and Jeff Hawkins (Fluor Vice President and Site Project Director). They provided their perspective on the project status and the process improvements underway with respect to site industrial safety, the nuclear safety culture among the workforce, procurement, the project schedule, labor productivity and staffing, module fabrication and installation, field engineering and other aspects of the construction of the plant. Each voiced their deep commitment to completing the project

Page 1 of 4

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E-mail: dukes.scott@regstaff.sc.gov ♦ Website: <http://www.regulatorystaff.sc.gov>

and recognized several key challenges that must be overcome to meet the project schedule.

3. An additional special briefing was held with Dan Magnarelli (Westinghouse), who heads up the Functional Area Assessments, and Rob Carlon and Mike Valore (Fluor) who are also working in this area. The status of these assessments and the implementation of the recommendations from at least some of these assessments are more advanced than we had previously understood. This briefing concentrated on the assessment of the procurement process and we learned the minimum/maximwn methodology for the purchase of construction commodities is being implemented in several areas. This has the potential to result in decreased construction delays due to material unavailability. An extensive inventory of on-site commodities, along with an assessment of their construction readiness, is also underway. ORS plans to discuss the results of the remaining Functional Area Assessments, which cover a variety of fields including quality control, welding/NDE, field engineering and subcontracting, at future meetings.
4. ORS also had the opportunity to meet with senior SCE&G staff to discuss observations made during this visit. At the end of the visit, ORS met with Ron Jones, Byron Hinson and Jeff Archie. ORS provided an assessment of our concerns, especially with regard to schedule performance and the bases for cost increases and change orders being discussed as part of Docket No. 2016-223-E. ORS also discussed observations related to quality programs.
5. Craft labor productivity still continues to be an issue on the project. The target direct craft labor performance factors are still not being met and overall productivity is still falling significantly short of the goals set by Westinghouse and Fluor earlier this year. The previous monthly production goal for June was for approximately 1.25% of the work remaining to be completed during the month while the actual value achieved was 0.6%. The project construction was scheduled to be at about 25% complete by the end of June while it was actually at about 22% complete. This remains a serious issue that requires continued focus.
6. Related to the issue of production, craft staffing levels continue to be problematic. Fluor was scheduled to have added about 1,000 craft laborers to the project as of the end of June; but the net increase taking into account attrition has only been about 700. Attrition of the existing staff and the inability to attract qualified craftsmen, especially welders, is continuing to hamper the effort to increase the workforce. Fluor briefed ORS on some of their proposed strategies to mitigate these issues; however, until more progress towards meeting staffing goals occurs, this remains an area of concern.

7. The project faces several significant milestones over the course of the next month. Westinghouse and Fluor's performance with respect to completing these milestones effectively and on schedule will be a key indicator of performance trends. These challenges include the placement of concrete in Unit 2 RC01 and RC02 (reinforced concrete portions of the Shield Building), setting the Unit 2 CA02 module, the concrete placement of Layer 6 East in Unit 2 containment and the setting of the remainder of the Unit 3 CA20 module (subassemblies 1&2). If these activities all occur at or near schedule, it would be a significant indicator that the project has turned the corner on productivity and schedule adherence.
8. It was concerning to learn that the fabrication of the sub-modules for the Unit 3 CA03 module will remain with CB&I-Lake Charles. Although the logic (material availability, primarily) for this decision appears to be sound, the past performance of CB&I-LC with respect to producing modules on schedule and with the appropriate paperwork is concerning.
9. The project performance in all areas other than civil-structural still has not been demonstrated and remains a concern. Unit 2 is quickly approaching a point at which all major structural modules will be installed. As such, the focus of the work will begin to incorporate other disciplines more heavily. These areas include piping erection, cable raceway installation and cable pulling, instrumentation and tubing installation, HVAC equipment and ductwork installation and wiring. Historically, these areas have been some of the most difficult to complete when constructing nuclear power plants. Sustained performance in these areas going forward is critical for project success.
10. As the project progresses, an increasing number of Licensing Amendment Requests (LARs) will need to be processed each month to support construction. The number of LARs to be processed each month must double from 4 or 5 per month to 8 to 10 per month over the next several months in order to support construction activities. This presents another major challenge for the project.

As to the update filing:

- I. The justifications and bases for a number of the change orders identified by SCE&G in Docket No. 2016-223-E remain inadequate, and in at least one case ORS's concerns have increased. Subsequent documentation submitted to justify the cost of the third floor addition to the Service Building indicates that SCE&G's current plan is to descope the entire Service Building from the EPC contract and assume this responsibility on their own. This not only causes concerns regarding the validity of the third floor addition

estimate, but now means that the entire cost of the Service Building would be transferred out of the scope of the EPC contract to the Owner. This would involve detailed coordination and negotiation with Westinghouse regarding site access, as well as the timing of Construction activities and other commercial issues. The full impact of these changes on the budget for the Service Building is not yet known.

2. Agreement between Westinghouse and SCE&G has still not been reached on the revised milestone payment schedule. However, ORS was informed that the July transition payment of \$1100 million will be the last such payment and if agreement was not reached by August 1, the issue would be referred to the Dispute Resolution Board.
3. ORS remains concerned about the overall construction schedule and continues its review of other cost estimates contained in Docket.No. 2016-223-E.

Sincerely,

C. Dukes Scott
Executive Director